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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
LUONG, VINH	
ART UNIT	**PAPER NUMBER**
3682	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/21/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/761,568	BIRCHMEIER ET AL.	
	Examiner	Art Unit	
	Vinh T. Luong	3682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 February 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6,7,9-16,18,20-26 and 29-32* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6,7,9-16,18,20-26 and 29-32* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *24 January 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Vinh T. Luong
Primary Examiner

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

1. The amendment filed on February 21, 2007 has been entered.

2. The replacement sheets of drawings mentioned on, e.g., pages 1 and 8 of the amendment filed on February 21, 2007 have not been received.

3. The drawings are objected to because the drawings are inconsistent with the specification and the claims. For example, paragraph [0049] of the specification describes and claim 10 claims the fluid comprising water, oil, etc. However, FIGS. 1-5 show that the fluid is made of stipple or cheese in accordance with the drawing symbols for draftsperson in MPEP 608.02. Applicant is respectfully urged to follow examples of proper drawings in the Guide for the Preparation of Patent Drawings available from the USPTO website www.uspto.gov.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because of the objection above. Applicant is advised to employ the services of a competent patent draftsperson outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

5. The disclosure is objected to because of the following informalities: because the drawings are inconsistent with the specification and the claims. For example, paragraph [0049] of the specification describes and claim 10 claims the fluid comprising water, oil, *etc.* However, FIGS. 1-5 show that the fluid is made of stipple or cheese in accordance with the drawing symbols for draftsperson in MPEP 608.02. Appropriate correction is required.

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

7. Claims 9, 18, and 29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear whether a confusing variety of terms, such as, "particles" and "at least one solid mass" in claims 9, 18, and 29 refer to the same or different things. See double inclusion in MPEP 2173.05(o) and MPEP 608.01(o).

8. Claims 1, 3, 6, 7, and 11, and claim 9, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreuzer'300 (EP 0 414 300 A1 cited by Applicant) in view of Pierce (US Patent No. 3,006,690).

Regarding claims 1 and 9, Kreuzer'300 teaches a steering wheel for a vehicle, comprising:

a central member 3 attached to a steering column (not shown);

an outer rim 4 connected to the central member 3 and having an internal chamber (at 6 in Fig. 2), wherein the outer rim 4 generally encircles the central member 3; and

a fluid 6 disposed within the internal chamber, wherein the fluid 6 dampens vibration during steering wheel use and occupies less than an entire volume of the central member 3 including less three quarters of the entire volume of the internal chamber as shown in FIG. 2.

Kreuzer'300 teaches the invention substantially as claimed. However, Kreuzer'300 does not teach at least one solid mass/particles disposed within the fluid.

Pierce teaches at least one solid mass or particles 25 disposed within the fluid 24 in order to balance or dampen the vibration. Pierce, column 1, line 65 through column 2, line 14.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use at least one solid mass or particles disposed within the fluid in order to balance or dampen the vibration of the steering wheel of Kreuzer'300 as taught or suggested by Pierce.

Regarding claim 3, Kreuzer'300's fluid 6 has a volume selected to dampen vibrations of the outer rim caused by operation of a connected vehicle. Kreuzer'300', English abstract.

Regarding claim 6, Kreuzer'300's fluid 6 inherently has a viscosity selected to dampen vibrations of the outer rim 4 caused by operation of a connected vehicle. See English abstract.

Regarding claim 7, Kreuzer'300's fluid 6 inherently has a weight selected to dampen vibrations of the outer rim 4 caused by operation of a connected vehicle. See English abstract.

Regarding claim 11, Kreuzer'300's fluid 6 inherently has a volume, viscosity, and weight selected to provide a predetermined inertia for the outer rim 4.

9. Claims 1, 2, 10, 12, 15, 16, 22-26, 31, and 32, and claims 9, 18, and 29, as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Kreuzer'383 (DE 39 27 383 A1) in view of Kreuzer'084 (US Pub. No. 2002/0125084 A1 cited by Applicant).

Regarding claims 1 and 9, Kreuzer'383 teaches a steering wheel for a vehicle, comprising:

a central member 3 attachable to a steering column (not shown);

an outer rim 4 connected to the central member 3 and having an internal chamber (at 6 in Fig. 2), wherein the outer rim 4 generally encircles the central member 3; and

a fluid 6 disposed within the internal chamber, wherein the fluid 6 dampens vibration during steering wheel use and occupies less than an entire volume of the internal chamber. See Fig 2 and abstract. Kreuzer'383's fluid occupies less than the entire volume of the internal chamber, thus, Kreuzer'383 fluid inherently includes the amount that is less than three quarters of the entire volume.

Kreuzer'383 teaches the invention substantially as claimed. However, Kreuzer'383 does not teach particles or at least one solid mass disposed within the fluid.

Kreuzer'084 teaches particles or at least one solid mass 40 (FIG. 5) disposed within the fluid (electrically conductive elastomer or 42, 42') in order to balance or dampen the vibration. Kreuzer'084, paragraphs [0026] and [0045], and claims 1-17.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use particles or at least one solid mass disposed within the fluid in order to balance or dampen the vibration of the steering wheel of Kreuzer'383 as taught or suggested by Kreuzer'084.

Regarding claim 2, Kreuzer'383's chamber is hollow and has a tubular form (see English abstract), thus, it is continuous such that the fluid may flow in both a clockwise and a counterclockwise direction from each point within the internal chamber.

Regarding claims 10 and 23, Kreuzer'383's fluid 6 is selected from a group consisting of water, oil, grease, antifreeze, and a combination thereof. Kreuzer'383, English abstract.

Regarding claim 12, Kreuzer'383's fluid is a mixture of glycol and water (*i.e.*, an antifreeze fluid), thus, the fluid remains in a liquid state between approximately -40° Fahrenheit and approximately +194° Fahrenheit. This fact is well known as evidenced by publications about antifreeze attached to the previous Office action.

Regarding claims 15 and 18, see regarding claims 1, 2, and 4 above. Further, note that Kreuzer'084 teaches or suggests a plurality of particles in paragraph [0026].

Regarding claim 16, Kreuzer'383's outer rim 4 is generally circular.

Regarding claim 22, Kreuzer'383's internal chamber is disposed entirely within the outer rim 4.

Regarding claim 24, Kreuzer'383's fluid 6 has a volume, viscosity, and weight selected to dampen vibrations of the outer rim caused by operation of a connected vehicle. Kreuzer'383, abstract.

Regarding claim 25, Kreuzer'383's fluid 6 has a volume, viscosity, and weight selected to provide a predetermined inertia for the outer rim 4. Kreuzer'383, abstract.

Regarding claims 26 and 29, see regarding claims 15 and 24 above.

Regarding claim 31, see regarding claim 10 or 23 above.

Regarding claim 32, Kreuzer'383 teaches a steering wheel for a vehicle, comprising: central member means 3 for attachment to a steering column of a vehicle; outer rim means 4 for connection to the central member means 3, the outer rim means 4 having an internal chamber, wherein the outer rim means 4 generally encircles the central member means 3; a damping means 6 disposed within the internal chamber for damping vibrations of the outer rim 4 caused by operation of the vehicle, wherein the damping means comprises a fluid 6 that occupies less than an entire volume of the internal chamber.

Kreuzer'383 teaches the invention substantially as claimed. However, Kreuzer'383 does not teach particles disposed within the fluid.

Kreuzer'084 teaches particles disposed within the fluid (electrically conductive elastomer) in order to balance or dampen the vibration. Kreuzer'084, paragraph [0026] and claims 1-17.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use particles disposed within the fluid in order to balance or dampen the vibration of the steering wheel of Kreuzer'383 as taught or suggested by Kreuzer'084.

10. Claims 1, 13-15, 20, 21, 26, 30, and 32, and claims 9, 18, and 29, as best understood are rejected under 35 U.S.C. 103(a) as being unpatentable over Masahiro'858 (Japanese Utility Model No. 56-99858) in view of Kreuzer'084.

Regarding claims 1, 9, 15, 18, 26, and 29, Mashahiro'858 teaches a steering wheel for a vehicle, comprising:

a central member 2 attached to a steering column (not shown);

an outer rim 3 connected to the central member 2 and having a continuous, internal chamber 5, wherein the outer rim 3 generally encircles the central member 2; and

a fluid 10 disposed within the internal chamber 5, wherein the fluid 10 dampens vibration during steering wheel use. Note that the fluid 10 is capable of occupying less than three quarters of the entire volume of the chamber 5 by, e.g., (a) partially filling the chamber 5 as seen in Kreuzer'383 or Kreuzer'300; or (b) opening the plug 11 to partially drain the fluid 10 out of the chamber 5.

Masahiro'858 teaches the invention substantially as claimed. However, Masahiro'858 does not teach particles or at least one solid mass disposed within the fluid.

Kreuzer'084 teaches particles or at least one solid mass 40 (FIG. 5) disposed within the fluid (electrically conductive elastomer or 42, 42') in order to balance or dampen the vibration. Kreuzer'084, paragraphs [0026] and [0045], and claims 1-17.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use particles or at least one solid mass disposed within the fluid in order to balance or dampen the vibration of the steering wheel of Masahiro'858 as taught or suggested by Kreuzer'084.

Regarding claims 13, 20, and 30, Masahiro'858's outer rim 3 comprises a sealable hole 7, 8 for inserting the fluid 10 into the internal chamber 5.

Regarding claims 14 and 21, Masahiro'858 teaches a removable plug 11 sized to be seated in the hole 7, 8.

Regarding claim 32, Mashahiro'858 teaches a steering wheel for a vehicle, comprising: central member means 2 for attachment to a steering column of a vehicle; outer rim means 3 for connection to the central member means 2, the outer rim means 3 having an internal chamber 5, wherein the outer rim means 3 generally encircles the central member means 2; a damping means 10 disposed within the internal chamber 5 for damping vibrations of the outer rim 3 caused by operation of the vehicle, wherein the damping means comprises a fluid 10 that is capable of occupying less than an entire volume of the internal chamber 5.

Kreuzer'084 teaches particles disposed within the fluid (*i.e.*, electrically conductive elastomer) in order to balance or dampen the vibration. Kreuzer'084, paragraph [0026] and claims 1-17.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use particles disposed within the fluid in order to balance or dampen the vibration of the steering wheel of Masahiro'858 as taught or suggested by Kreuzer'084.

11. Claims 1, 13-15, 20, 21, 26, 30, and 32, and claims 9, 18, and 29, as best understood, are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Tetsuo et al. (Japanese Utility Model No. 61-222868).

35 USC 102(b)

Regarding claims 1, 9, 15, 18, 26, and 29, Tetsuo teaches a steering wheel for a vehicle, comprising:

a central member 2 attached to a steering column (not shown);

an outer rim 3 connected to the central member 2 and having a continuous, internal chamber 7, wherein the outer rim 3 generally encircles the central member 2; and

a fluid 4 disposed within the internal chamber 7, wherein the fluid 4 dampens vibration during steering wheel use, and wherein particles/at least one solid mass 6 are disposed within the fluid 4. Note that the fluid 4 is capable of occupying less than three quarters of the entire volume of the chamber 5 by, e.g., (a) partially filling the chamber 7 as seen in Kreuzer'383 or Kreuzer'300; or (b) opening the plug 5 to partially drain the fluid 4 out of the chamber 7.

Regarding claims 13, 20, and 30, Tetsuo's outer rim 3 comprises a sealable hole 5d (FIG. 3) for inserting the fluid 4 into the internal chamber 7.

Regarding claims 14 and 21, Tetsuo teaches a removable plug 5b sized to be seated in the hole 5d.

Regarding claim 32, Tetsuo teaches a steering wheel for a vehicle, comprising: central member means 2 for attachment to a steering column of a vehicle; outer rim means 3 for connection to the central member means 2, the outer rim means 3 having an internal chamber 7, wherein the outer rim means 3 generally encircles the central member means 2; a damping means 4 disposed within the internal chamber 7 for damping vibrations of the outer rim 3 caused by operation of the vehicle, wherein the damping means comprises a fluid 4 that is capable of occupying less than an entire volume of the internal chamber 7, and wherein particles 6 are disposed within the damping means 4.

35 USC 103

Regarding claims 1, 9, 13-15, 18, 20, 21, 26, 29, 30, and 32, Tetsuo teaches the invention substantially as claimed. However, Tetsuo does not explicitly teach the fluid occupying less than the entire volume or less than three quarters of the entire volume of the chamber.

It is common knowledge in the art to change the amount of fluid of Tetsuo such that it occupies less than the entire volume or less than three quarters of the entire volume of the chamber in order to dampen the steering wheel. The amount of fluid would have been a matter of choice since such amount of fluid would not perform differently than the prior art device. See legal precedents regarding change in size/proportion and ranges in MPEP 2144.04 and 2144.05.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to change the amount of fluid of Tetsuo such that it occupies less than the entire volume or less than three quarters of the entire volume of the chamber in order to dampen the steering wheel as taught or suggested by common knowledge in the art.

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Kensuke (plug 30 in FIGS. 1 and 2).

13. Applicant's arguments filed February 21, 2007 have been fully considered but they are not persuasive.

Drawings & Disclosure

The previous objections are reiterated since Applicant's amended drawings have not been received.

35 USC 112, Second Paragraph

The previous rejection under 35 USC 112, second paragraph, is withdrawn in view of the amendment. However, amended claims 9, 18, and 29 necessitated new ground of rejection above.

35 USC 102

The previous rejection under 35 USC 102 is withdrawn in view of the amendment. Applicant's arguments are deemed to be moot.

35 USC 103

At the outset, the rejection based on Gilmore'531 is withdrawn in view of Applicant's amendment. Applicant's arguments about Gilmore'531 are deemed to be moot.

Applicant further contended that: (a) claims 9, 18, and 19 require that the fluid occupies less than three quarter of the entire volume of the chamber; and (b) Pierce does not teach such limitation.

The Court has long held that obviousness question cannot be approached on basis that skilled artisans would only know what they read in references; such artisans must be presumed to know something about the art apart from what the references disclose. *In re Jacoby*, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). Moreover, conclusion of obviousness may be made "from common knowledge and common sense of the person of ordinary skill in the art without any specific hint or suggestion in a particular reference." *In re Bozek*, 416 F.2d 1385, 1390, 163 USPQ 545, 549 (CCPA 1969). In addition, the Examiner respectfully submits that our reviewing Court recently reiterated in *Alza Corp. v. Mylan Laboratories Inc.*, 80 USPQ2d 1001 (Fed. Cir. 9/6/2006): "[t]he test for an implicit showing is what the combined teachings,

knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." (*Id.* at 1004). See also *Ormco Corp. v. Align Technology Inc.*, 79 USPQ2d 1931 (Fed. Cir. 2006) and *In re Johnston*, 77 USPQ2d 1788 (Fed. Cir. 2006).

Applying the MPEP section quoted by Applicant on page 14 of the Amendment to the instant case, the Examiner respectfully submits that the Examiner has established a *prima facie* case of obviousness.

First, the references Kreuzer'300, and Kreuzer'383 themselves teach the fluid occupying less than the entire volume of the chamber. Even without any specific hint or suggestion in the cited reference, one having common sense or common knowledge in the art would recognize that the amount of fluid that is less than the entire volume of the chamber includes the amount of fluid that is less than three quarters of the volume of the chamber. In fact, Applicant apparently concedes to this fact as seen in claim 32 wherein it claims "less than an entire volume of the central member means." Alternatively, the common knowledge of one having ordinary skill in the art teaches that to adjust the amount of fluid in the chamber of Kreuzer'300 or Kreuzer'383 such that it is less than three quarters of the volume of the chamber would have been a matter of choice since such amount of fluid would not perform differently than the prior art device. See legal precedents regarding change in size/proportion and ranges in MPEP 2144.04 and 2144.05.

Second, the reasonable expectation of success in this case is the damping of the vibration of the steering wheel set forth in the disclosure of the references.

Third, the claimed combination and reasonable of expectation of success are found in the prior art, not on Applicant's disclosure. Hindsight is eliminated in this instant because the

combined references are not only in the same field of endeavor (vibration damper) but also solve the same problem (vibration) in substantially the same way (fluid and/or particles). *Alza Corp. v. Mylan Laboratories Inc., supra.*

For the foregoing reasons, Applicant's request that a timely Notice of Allowance be issued in this case is respectfully denied.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinh T. Luong whose telephone number is 571-272-7109. The examiner can normally be reached on Monday - Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on 571-272-6917. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Luong

March 19, 2007

Vinh T. Luong
Primary Examiner